

*DMITRIYEV, V.I.*

PHASE I BOOK EXPLOITATION

293

Gibshman, A. Ye., Danilov, S.K., Dmitriyev, V.I., Korneyev, A.I.,  
Tverskoy, K.N., Umbliya, V.E., Khanukov, Ye. D.,  
Chernomordik, D.I., Chudov, A.S., Shil'nikov, N.S.

Ekonomika transporta (The Economics of Transportation) 2d rev.  
ed. Moscow, Transzheldorizdat, 1957. 711 p. 30,000 copies  
printed.

Ed.: Krishtal', L.I.; Tech. ed.: Khitrov, P.A.

PURPOSE: This textbook is intended for students in engineering-  
economic branches of Railway Transportation Institutes, as well  
as for railway workers engaged in the independent study of railway  
economics.

COVERAGE: The economic aspects of railway transportation are dis-  
cussed in this textbook. It covers such subjects as technical-  
economic problems, the most efficient way to use available  
facilities, methods for planning and organizing various branches

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of transportation operations and production, wages, costs, finances, and business accountability (khozraschet). For detailed information see Table of Contents. The book is written by several specialists in the field of railway transportation: Chapters I and IV, and part 1 of chapter II are written by Prof. S.K. Danilov; Ch. II, (parts 2, 3, and 4) is written by D.I. Chernomordik, Doctor of Economic Sciences; Ch. III by Docent A.I. Korneyev; Chapters V, VII, and VIII by Prof. Ye. D. Khanukov, Doctor of Economic Sciences; Chapters VI and XIV by Docent K.N. Tverskoy, Candidate of Economic Sciences; Ch. IX by V.I. Dmitriev, Candidate of Economic Sciences; Ch. X by Prof. A. Ye. Gibshman, Doctor of Technical Sciences; Ch. XI by Docent V.E. Umbliy, Candidate of Economic Sciences (deceased), revised by Prof. S.K. Danilov; Ch. XII by Docent A.S. Chudov, Candidate of Technical Sciences; Ch. XIII by Docent N.S. Shil'nikov, Candidate of Economic Sciences. There are 24 pages of references (pp. 682 through 705). Pages 682 to the middle of 694 are devoted exclusively to references from the works of Marx, Engels, and Lenin.

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From the middle of p. 694 through p. 705, the references are transportation orders issued by the Communist Party and the Soviet government. No other personalities are mentioned.

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AVAILABLE: Library of Congress

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GO/lsb  
24 July 1958

DMITRIYEV, Valerian Ivanovich,; KHANUKOV, Ye.D., red.; KRISHTAL', L.I., red.  
KHITROV, P.A., tekhn. red.

[Problems in the economics of rolling stock] Voprosy ekonomiki  
vagonnogo parka. Moskva, Gos. transp. zhel-dor. izd-vo, 1958. 291 p.  
(MIRA 11:12)

(Railroads--Rolling stock)

GRECHANYUK, N.M., podpolkovnik; DMITRIYEV, V.I., kand.istor.nauk, kapitan  
2 ranga; KRINITSYN, F.S., kand.istor.nauk, polkovnik; CHERNOV,  
Yu.I., kapitan 3 ranga; LUPACH, V.S., red.; KONOVALOVA, Ye.K.,  
tekh.n.red.

[The Baltic Fleet; a historical sketch] Baltiiskii flot;  
istoricheskii ocherk. Moskva, Voen.izd-vo M-va obor.SSSR,  
1960. 373 p. (MIRA 14:2)  
(Russia--Navy)

SHUKSTAL', Ya.V., kand. ekonom. nauk; VERKHOVSKIY, I.A., kand. ekonom. nauk; FOMIN, V.M., kand. ekonom. nauk; MEZENEV, N.I., inzh.;  
DMITRIYEV, V.I., kand. ekonom. nauk; PADNYA, V.A., inzh.;  
Prinimali uchastiye: ZOTIKOVA, V.I., kand. ekonom. nauk;  
YELISEYEVA, T.V., inzh.; KUBLITSKAYA, V.Kh., inzh.;  
KUDRYAVTSEVA, T.N., inzh.; MEZENEV, N.I., inzh.; TIKHONCHUK, M.K., inzh.; FEDOSOVA, V.N., tekhn.; DOBSHITS, M.L., red. izd-va; TIKHOMIROVA, S.G., tekhn. red.; LAUT, V.G., tekhn. red.

[Scope of the use of railroads and motorvehicles for short-distance freight haulage] Sfery primeneniia zheleznodorozhnogo i avtomobil'nogo transporta pri perevozke грузов na korotkie rasstoianiia. Moskva, Izd-vo Akad. nauk SSSR, 1961. 197 p. (MIRA 15:2)

1. Akademiya nauk SSSR. Institut kompleksnykh transportnykh problem.

(Transportation, Automotive) (Railroads---Freight)



BELYUNOV, S.A., inzh.; DMITRIYEV, V.I., dots., kand. ekon. nauk; KUCHURIN, S.F.; LIN'KOV, M.V.; MULYUKIN, F.P.; NEDOPEKIN, G.K., inzh.; PUZYNYA, I.Ye., inzh.; RAYKHER, G.Kh., inzh.; TRUBACHEV, T.Ye., inzh.; TYVAN-CHUK, D.P., inzh.; UMBLIYA, V.E., kand. ekon. nauk; KHOKHLOV, N.F., dots. kand. ekon. nauk; CHUDOV, A.S., prof., doktor ekon. nauk; ERLIKH, V.S., inzh.; IVLIYEV, Ivan Vasil'yevich, red.; KRISHTAL', L.I., red.; KHITROV, P.A., tekhn. red.

[Planning in railroad transportation] Planirovanie na zheleznodorozh-  
nom transporte; spravochnik. Moskva, Vses. izdatel'sko-poligr. ob"-  
edinenie M-va putei soobshchenie, 1961. 470 p. (MIRA 14:11)  
(Railroads—Management)

VISHNEFOL'SKIY, S.A., kand. ekon. nauk; BAYEV, S.M., inzh. putey soobshcheniya; BONDARENKO, V.S.; RODIN, Ye.D.; CHUVLEV, V.P.; TURETSKIY, L.S.; SMIRNOV, G.S.; SHAPIROVSKIY, D.B.; OBERMEYSTER, A.M.; SINITSIN, M.T.; KOGAN, N.D.; PETRUCHIK, V.A.; GRUNIN, A.G.; KOLESNIKOV, V.G.; MARTIROSOV, A.Ye.; KROTKIY, I.B. [deceased]; ZENEVICH, G.B.; MEZENTSEV, G.A.; KOLOMOYTSSEV, V.P., kand. tekhn. nauk; ZAMAKHOVSKAYA, A.G., kand. tekhn. nauk; MAKAL'SKIY, I.I., kand. ekon. nauk; MITROFANOV, V.F., kand. ekon. nauk; CHILIKIN, Ya.A.; BAKAYEV, V.G., doktor tekhn. nauk, red. Prinsipali uchastiye: DZHAVAD, Yu.Kh., red.; GUBERMAN, R.L., kand. ekon. nauk, red.; RYABCHIKOV, P.A., red.; YAVLENSKIY, S.D., red.; BAYRASHEVSKIY, A.M., kand. tekhn. nauk, red.; POLYUSMKIN, V.A., red.; BALANDIN, G.I., red.; ZOTOV, D.K., red.; RYZHOV, V.Ye., red.; BOL'SHAKOV, A.N., red.; VUL'FSON, M.S., kand. ekon. nauk, red.; IMITRIYEV, V.I., kand. ekon. nauk, red.; ALEKSANDROV, L.A., red.; LAVRENOVA, N.B., tekhn. red.

[Transportation in the U.S.S.R.; marine transportation] Transport SSSR; morskoi transport. Moskva, Izd-vo "Morskoi transport," 1961. 759 p. (MIRA 15:2)

(Merchant marine)

DMITRIYEV, V.I., doktor ekonom.nauk; PETROV, V.I., kand.tekhn.nauk

Distribution of shipments among the various types of transportation. Zhel.dor.transp. 44 no.11:24-29 N '62.

(MIRA 15:11)

(Transportation)

KOSTYUKOV, N.S.; ANTONOVA, N.P.; DMITRIYEV, V.I.

Serret effect in electrical porcelain. Zhur. fiz. khim. 39  
no.9:2175-2177 S '65. (MIRA 18:10)

1. Moskovskiy gosudarstvennyy nauchno-issledovatel'skiy  
elektrokeramicheskii institut.

DMITRIYEV, V.I.

16(1) PHASE I BOOK EXPLOITATION SOV/2660

Vsesoyuzny matematicheskiy s'ezd. 3rd, Moscow, 1956  
Trudy. t. 2; Kratkoye soderzhanie sektsionnykh dokladov. Doklady  
Inostrannykh uchenykh (Transactions of the 3rd All-Union Mathema-  
tical Conference in Moscow. vol. 2: Summary of Sectional Reports.  
Reports of Foreign Scientists) Moscow, Izd-vo AN SSSR, 1959.  
247 p. 2,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskii institut.

Tech. Ed.: G.M. Shvachko; Editorial Board: A.A. Abramov, V.O.  
Bol'tynskiy, A.M. Vasil'ev, B.V. Medvedev, A.D. Myshkis, S.M.  
Nikol'skiy (Resp. Ed.), A.G. Postnikov, Yu. V. Prokhorov, K.A.  
Rybnikov, P. L. Ul'yanov, V.A. Uspenskiy, M.G. Chetaev, O. Ye.  
Shilov, and A.I. Shirshov.

PURPOSE: This book is intended for mathematicians and physicists.

COVERAGE: The book is Volume IV of the Transactions of the Third All-  
Union Mathematical Conference, held in June and July 1956. The  
book is divided into two main parts. The first part contains sum-  
maries of the papers presented by Soviet scientists at the con-  
ference that were not included in the first two volumes. The  
second part contains the text of reports submitted to the editor  
by non-Soviet scientists. In those cases when the non-Soviet sci-  
entist did not submit a copy of his paper to the editor, the title  
of the paper is cited and, if the paper was printed in a previous  
volume, reference is made to the appropriate volume. The papers,  
both Soviet and non-Soviet, cover various topics in number theory,  
algebra, differential and integral equations, function theory,  
functional analysis, probability theory, topology, mathematical  
problems of mechanics and physics, computational mathematics,  
mathematical logic and the foundations of mathematics, and the  
history of mathematics.

Aleksandrov, A.S. (Leningrad). On one exact solution of a non-  
stationary boundary value problem for a nonhomogeneous medium 116

Rabich, V.M. (Leningrad). The ray method of studying the in-  
tensity of wave fronts 116

Gravilov, L.I. (Leningrad). Gravitational potential of an  
elliptic paraboloid and an infinite parabolic cylinder 117

Gel'chinskii, B.Ye. (Leningrad). Certain dynamic problems  
of the theory of elasticity for media which contain spherical  
separation boundaries 118

Bel'tukov, V.I. (Moscow). Diffraction on conducting bodies  
of infinite dimensions 118

Prestonovskiy, Yu.M. (Moscow). The method of successive ap-  
proximations for problems on the perturbation of eigenvalues 118

Kisnerkin, E.S. (Moscow). On the baroclinic effect caused by  
wind flows in a deep sea 119

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DMITRIYEV, V.I., inzhener.

Double automatic potentiometers. Priborostroenie no.9:8-10 S '57.  
(MIRA 10:10)

(Potentiometer)

Dmitriyev, V. I.

AUTHOR: Dmitriyev, V. I.

119-1-8/13

TITLE: On the Problem of the Automatic Control of Complicated Details (K voprosu ob avtomaticheskoy kontroly slozhnykh izdeliy)

PERIODICAL: Priborostroyeniye, 1958, Nr 1, pp. 24-28 (USSR)

ABSTRACT: By means of the testing of electronic valves it is shown which problems have to be studied and solved in automatic quality control:  
The automatic control of electric details can be carried out in three different ways:  
a) The detail makes it possible to measure all parameters at once.  
b) The detail makes it necessary to control some parameters with different regimes.  
c) The detail makes necessary separated regimes for the control of the single parameters.  
The way mentioned under c) needs the most difficult apparatus.

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By means of a non-automized control table (blockscheme) it is shown which operations are necessary and how the

On the Problem of the Automatic Control of Complicated  
Details

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temporal course of control takes place (cyclogram).

As advantage the following blockschemes with the  
respective cyclograms are described:

- 1) Apparatus where the preparation and investigation of the  
detail is carried out parallel.
- 2) Automized apparatus for case a)
- 3) Automized apparatus for case b)
- 4) Semi-automatic apparatus for case c)

An important simplification can only be reached if "brain"  
cells are used. By storing all parameters the answer can  
be obtained at once, whether the detail to be investigated  
is correct. There are 5 figures.

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1. Quality control-Automation

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8(2), 28(1)

SOV/161-58-4-5/28

AUTHOR: Dmitriyev, Vladimir Ivanovich, Post-graduate Student

TITLE: Issuing of Rating Plates at the Automatic Control of Complicated Products (Pasportizatsiya pri avtomaticheskoy kontrolye slozhnykh izdeliy)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Elektromekhanika i avtomatika, 1958, Nr 4, pp 26-35 (USSR)

ABSTRACT: The question is treated here how it is possible to obtain automatically rating plates with the measured values of the controlled parameters at the examination of complicated electrotechnical products as electromotors, electron-beam indicators or special radio tubes. The automatic control plants can be made in form of a line or circular shaped (Fig 1). In both cases they have A positions for the preparation and N position for the examination (Ref 1). According to the number of the examination positions the plants can be divided into 3 kinds: 1)  $N = 1$ , a successive control, what means that at the same time only one product is controlled. 2)  $N = K$ , series-parallel control, what means that at the same time some products are controlled, at which several parameters of the concerning product are controlled at each

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SOV/161-58-4-5/20  
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position. 3)  $N = n$ , parallel control, what means that at the same time  $n$  products are controlled, at which one parameter is controlled at each position. - By means of a system of transmitters within the tolerance limits are reduced to the alteration of a voltage from zero to  $U$  volts. This allows the use of a single type of the recording instrument for the determination of different physical values (Ref 2). The author proposes an issuing of rating plates for such an apparatus. This is a single recording instrument or a system of such, which gives as initial block of the plant for the automatic control a rating plate with the determined values of the controlled parameters recorded in it. The device for issuing rating plates differs from an ordinary recording instrument by the following: 1) discreet chart transport, 2) control of the chart mechanism and of the mechanism of the printing by means of electric impulses. 3) Cutting-off knife. - The device for issuing rating plates can be constructed: 1) on the basis of a multipoint galvanometer with a hoop drop and 2) on the basis of an automatic potentiometer according both to the static (servomechanism) and to the dynamic

Issuing of Rating Plates at the Automatic Control of Complicated Products

SOV/161-58-4-5/28

compensation, that is a) with a recording of marks, b) of lines, c) of numbers which have to be deciphered, and d) of numbers which need not be deciphered. - The single constructions are explained in detail. At a series-parallel- and at a parallel control two fundamental different constructions of the device for issuing rating plates are possible. 1) The device for issuing rating plates is made ring-shaped or as a line. This is impelled by the drive of the control plant or by a drive synchronized with the control plant. Such a device for issuing rating plates is fully described and shown in figures 6 and 7. In figure 7 the scheme of a device for issuing rating plates is shown which was elaborated with assistance of the kafedra Avtomatiki i telemekhaniki MEI (MEI Chair of Automation and Telemechanics) and of the author by the design office of the Ministerstvo vysshego obrazovaniya SSSR (Ministry of Higher Education of the USSR). 2) The second and more prospective construction has a "memory" which is a connecting link between the transmitter and device of issuing rating plates. The values of all parameters are conducted to the "memory". The values of the parameters of the instrument, the examination of which is finished, are transmitted from the "memory" to the

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Issuing of Rating Plates at the Automatic Control of Complicated Products

rating plate simultaneously or successively by means of devices for issuing rating plates being used at the series control. The construction of this device for issuing rating plates will be reported by the author in a separate paper. There are 9 figures and 5 Soviet references.

ASSOCIATION: Kafedra avtomatiki, telemekhaniki i matematicheskikh mashin  
Moskovskogo energeticheskogo instituta  
(Chair of Automation, Telemechanics and Mathematical Machines  
at the Moscow Institute of Power Engineering)

SUBMITTED: September 2, 1958

Card 4/4

SOV/120-58-5-28/32

AUTHOR: Dmitriyev, V. I.

TITLE: Measurement of Gas Pressure in Disconnected Cathode-Ray Tubes (Izmereniye davleniya gaza v otpayannykh elektronno-luchevykh trubkakh)

PERIODICAL: Priory i tekhnika eksperimenta, 1958, Nr 5, pp 104-106 (USSR)

ABSTRACT: The pressure of gas in cathode-ray tubes is supposedly standardized and measured during manufacture. Close control of the pressure is, however, not in general feasible in mass production processes and little is known about the statistical variations in gas pressure from the specified standard as the tubes leave the production line. Moreover, once the tube is incorporated in the piece of equipment for which it is destined it is not usually practicable to remove it again for measurements. The importance of gas-pressure variations depends somewhat on the purpose for which the tube is intended, e.g. it may not be so critical for television tubes as for tubes intended for scientific measurement. Nevertheless a knowledge of such variations is clearly

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SOV/120-58-5-28/32

# Measurement of Gas Pressure in Disconnected Cathode-Ray Tubes

desirable if only because it correlates with the probable lifetime of the tube. The present paper proposes for the measurement of gas pressure the relation:

$$p = K(I_i - I_L)/I_e$$

where  $p$  is the gas pressure;  $I_i$  is the positive ion current;  $I_e$  is the electron current;  $I_K$  is the leakage current, if any; and  $K$  is a coefficient which is given by standard theory and is independent of  $p$  so long as the latter is less than  $10^{-2}$  mm of mercury. Circuit diagrams are given for the measurement of the currents  $I_i$ ,  $I_e$ ,  $I_K$  in a cathode ray tube disconnected from its ancillary equipment. Obviously since one is looking for fluctuations from a standard in  $p$  the errors in measuring  $I_i$ ,  $I_e$ ,  $I_K$  must be small and known. The use of Card 2/3 potentiometer EPP-09 is recommended; all components should

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Measurement of Gas Pressure in Disconnected Cathode-Ray Tubes

be properly calibrated and stray impedances minimized and, if not actually eliminated, at least estimated fairly accurately. Statistical results for  $p$  will be published when measurements on a sufficiently large number of tubes have been made and analyzed. The paper contains 4 figures and 3 references, 2 Soviet and 1 English.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Institute)

SUBMITTED: October 8, 1957.

Card 3/3

MELETSKIY, A. A.; KORDA-SHEV, V. A.; KOTENKO, V. A.; et al. 1979. 1979.

Studying heat-transfer processes in the burning of 1, 4-difluoro  
glycol ether solvents. Dur. from 1 Nov. 1974 to 1 Dec. 1974  
(1974-1975)



DMITRIYEV, V.I., aspirant

Parameters of a high-temperature gas jet for metal cutting. Izv.  
vys. ucheb. zav.; mashinostr. no.8:134-149 '64.

(MIRA 17:11)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.

DMITRIYEV, V. I. Cand Phys-Math Sci -- (diss) "Study of electromagnetic fields  
applicable to <sup>problems</sup> ~~the aims~~ of aereoelectrical reconnaissance." Mos., 1959. 8 pp  
(Acad Sci USSR. Inst of Physics of the Earth im O. Yu. Shmidt), 125 copies  
(KL, 43-59, 120)

SOV/49-59-4-15/20

AUTHOR: Dmitriyev, V. I.

TITLE: The Effect of Ground Nonuniformities on the Field of a Straight Electric Cable of Infinite Length (Vliyaniye neodnorodnostey zemli na pole pryamolineynogo beskonechno dlinnogo kabelya)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 4, pp 621-623 (USSR)

ABSTRACT: A method of electro-surveying of the ground surface by means of a cable attached to a helicopter can be applied for determining of the ground nonuniformity. A field of the cable, to which a vertical line of the length  $\ell$  and infinitely thin, is joined (Fig 1), is considered for the air waving coefficient  $k_0 = 0$  and the ground waving coefficient

$$k = \frac{\omega}{c} \sqrt{\epsilon - i \frac{4\pi\sigma}{\omega}} \approx (1-i)2\pi \sqrt{\frac{\nu}{10\rho}}$$

In this formula,  $\nu$  - frequency,  $\rho$  - resistance of the ground. The wavelength in the ground is:

$$\lambda = \frac{2\pi}{\text{Re}k} = \sqrt{\frac{\nu}{10\rho}} \text{ km}$$

Card 1/5

SOV/49-59-4-15/20

The Effect of Ground Nonuniformities on the Field of a Straight Electric Cable of Infinite Length

The problem is solved by the formulae I and II on pp 621 and 622. The field of the cable can be expressed as a horizontal component of the vector-potential  $A$  along the cable  $H_x$  and  $H_z$  (the field is measured in oersteds, current  $I$  in amps,  $\Delta$  in km). The function  $A$  can be determined as:

$$A = 0 \quad \zeta > 0 ; \quad \Delta A - iA = 0 \quad \zeta < 0 .$$

Its logarithmic characteristics along the cable can be shown as  $A \sim \ln r$ . In general, the problem can be expressed as two systems. The solution of the system I for the uniform ground can be shown as:

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SOV/49-59-4-15/20

The Effect of Ground Nonuniformities on the Field of a Straight Electric Cable of Infinite Length

$$H_z^0 = -10^{-6} \frac{8\sqrt{2}\pi I}{\lambda} \int_0^{\infty} e^{-\zeta t} \sin \zeta t \frac{t dt}{t + \sqrt{t^2 + 1}},$$

which can be written as  $x/\lambda \geq 1$ , i.e. the component  $H_z^0$  decreases much faster with distance than  $H_x^0$ . Therefore, the latter is used in calculations since it is easier to measure it. To find an effect of the vertical line, the problem should be solved for the function  $A_a$ . In this case it is necessary to know the function  $A_0$ , i.e.  $A_0[\xi_0, \zeta]$  for  $\xi < 0$ . This is defined by the equation at the foot of p 622. Instead of the function  $A_a$  (II), the function  $F_a$  (top of p 623) can be applied. Assuming that a ground nonuniformity is found near the line, the value of  $H_x$  is determined as :

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SOV/49-59-4-15/20

The Effect of Ground Nonuniformities on the Field of a Straight Electric Cable of Infinite Length

$H_x = H_x^0 e^{-i\Phi}$ . The values of  $R$  and  $\Phi$  are illustrated in Figs 2 and 3 in relation to  $x/\lambda$  and  $l/\lambda$  with  $x_1 = x - x_0$  = distance from the line. It should be noted that: 1) the nonuniformity of the modulus of the field  $H_x$  has an order of several tens per cent and that of the phase of the field  $H_x$  - several tens of degrees; 2) the width of the nonuniformity has an order of 0.1-0.2 wavelength in the ground; 3) with an increase of length of the line, the value of nonuniformity decreases and its width increases.

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SOV/49-59-4-15/20

The Effect of Ground Nonuniformities on the Field of a Straight  
Electric Cable of Infinite Length

Thanks are given to A. N. Tikhonov for supervising this work. There  
are 3 figures and 2 Soviet references.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki Zemli (Academy of  
Sciences, USSR, Institute of Physics of the Earth)

SUBMITTED: October 20, 1958.

Card 5/5

SOV/49-59-9-13/25

AUTHORS: Tikhonov, A.N. and Dmitriyev, V.I

TITLE: On the Problem of Interference Effect in the Inductive Method of the Aero-electrosurvey

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 9, pp 1393-1395 (USSR)

ABSTRACT: A method is discussed where an emitter, in the form of a horizontal frame is placed on the aircraft flying parallel to the ground surface. A canister, hanging below the aircraft, contains a receiver and this arrangement permits the measuring of the vertical magnetic field. The error of the measurement, due to the vibrations of the canister, which causes the interference, can be determined from the vertical component of magnetic field, Eqs (1) and (2) where  $r, z$ , - cylindrical coordinates,  $k$  - waving no = 0 in air,  $I$  - current of the frame,  $S$  frame surface,  $L$  - angle between the vertical and the frame,  $h$  - height. The first term of  $E_q(2)$  represents the initial field  $H_z^0$ , related to  $R$  and  $\alpha$  as illustrated in Fig 1. The second term of  $E_q(2)$  represents the reflected field  $H_z^1$  which depends on  $R, h, \alpha$  and  $k$ . The latter being complex, is

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SOV/49-59-9-13/25

On the Problem of Interference Effect in the Inductive Method of the Aero-electrosurvey

substituted by the characteristic length  $\Lambda = 2\pi/\text{Re}k$ . The relation of the active  $\text{Re}H_z^1$  and reactive  $\text{Im}H_z^1$  parts of the reflected field to  $\alpha \Lambda$  at  $R = 100$  m and  $h = 150$  m, is shown in Figs 3 and 4 respectively. The useful signal  $P$  can be defined as Eq (3) where  $\Lambda_0 = 1000$  m - wave length. The relationship between  $P$  and  $R$ ,  $h$  and  $\alpha$ , is represented in Fig 5. The magnitude of the interference  $f$  for the canister vibrations  $\pm 2^\circ$  can be defined as Eq (4). Its relationship to  $R$ ,  $h$ , and  $\alpha$  is illustrated in Fig 6. The relationship between the useful signal and the interference can be obtained from Eq (5) where  $f_0 = 0.01$  - constant interference of the apparatus. The relation of  $S$  to  $R$ ,  $h$  and  $\alpha$  is shown in Fig 7, from which it can be seen that the magnitude of  $S$  increases when the value of  $(h - R)$  decreases. There are 7 figures.

ASSOCIATION: Akademiya nauk SSSR. Institut fiziki Zemli.  
(AS USSR. Institute of Physics of the Earth)

SUBMITTED: October 10, 1958

Card 2/2

✓

SOV/49-59-10-7/19

AUTHORS: Tikhonov, A. N., and Dmitriyev, V.I.

TITLE: On a Possibility of Applying the Inductive Method of  
Aero-Electric Survey for Geological Mapping

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya  
1959, Nr 10, pp 1481-1485 (USSR)

ABSTRACT: This is a continuation of the authors' work on this subject published in this journal, Nr 9, 1959, where they have shown that the vertical component of magnetic field can be measured under interference conditions. An attempt is made in the present work to determine the geological characteristics of deposits by means of a vertical component of the magnetic field in a limited range of frequencies. The Earth is assumed to be a two-layered medium, i.e. a homogeneous half-space with resistance  $\rho_2$  is overlaid by a stratum of deposits of thickness  $\ell$  and resistance  $\rho_1$ . The corresponding wave numbers (Fig 1) are  $k_0 = \omega/c$  - in air,  $k_1 = (1 - i) 2\pi/\lambda_1$  - in deposits and  $k_2 = (1 - i) 2\pi/\lambda_2$  - in bottom layer ( $\lambda$  - wavelength).

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Two cases can be distinguished: (A) The layer of deposits has a resistance much smaller than that of the

SOV49-59-10-7/19

On a Possibility of Applying the Inductive Method of Aero-Electric Survey for Geological Mapping

substrate, i.e. the layer of the thickness  $\ell$  lies on a non-conducting base. The vertical component of the magnetic field  $\text{Im } H_z$  at a height  $h$  is defined by the formulae at the bottom of p 1481. This case is illustrated in Figs 2 to 4. (B) The layer of deposits is thin in comparison with the wavelength and it is placed on a homogeneous conducting half-space. In this case deposits are substituted in calculations by an effective resistance  $\rho = \rho_1 / \ell$ . The vertical magnetic component is defined by the formula shown at the bottom of p 1483. This case is illustrated in Figs 5 to 8. There are 8 figures and 2 Soviet references.

ASSOCIATION: Akademiya nauk SSSR. Institut fiziki Zemli  
(Academy of Sciences USSR. Institute of Physics of the  
Earth)

SUBMITTED: December 30, 1958

Card 2/2



9,9700

S/049/60/000/008/003/015  
E201/E191

AUTHOR: Dmitriyev, V.I.

TITLE: A Solution of the Basic Problem in the Theory of  
Electromagnetic Induction Prospecting

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya,  
1960, No. 8, pp. 1124-1134

TEXT: The author gives an exact solution for the problem of  
diffraction of an electromagnetic field on a perfectly conducting  
semi-infinite plane buried in a uniform semi-infinite space with  
finite conductivity; this problem is the basis of electromagnetic  
prospecting. All earlier papers on the subject allowed either  
partially or not at all for the effect of a discontinuity at the  
semi-plane. An approximate solution obtained in this way (Ref.1)  
is valid only when the semi-plane lies deeper than  $0.1\lambda$ , where  $\lambda$   
is the electromagnetic wavelength in the semi-space. In the  
present paper the solution is reduced to finding an integral  
equation and an analytic solution of this equation. The solution  
is obtained in the form of an infinite series. An estimate of the  
precision of the result is given as a function of the number of  
Card 1/2

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S/049/60/000/008/003/015  
E201/E191

A Solution of the Basic Problem in the Theory of Electromagnetic Induction Prospecting

terms in the series taken into account, and of the depth of the semi-plane. It is shown that the number of terms necessary to achieve a given precision decreases with the depth of the semi-plane. If an error of 5% can be tolerated, it is sufficient to take only the first two terms of the series for any depth of the semi-plane. The paper is entirely theoretical, and Figs 1-4 illustrate some points in the solution of the problem. There are 4 figures and 4 Soviet references.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki zemli  
(Physics of the Earth Institute, AS USSR)

SUBMITTED: February 17, 1960

Card 2/2

~~DMITRIYEV, V.I.~~

The shielding effect of sediments in an anomalous field, Izv.  
AN SSSR Ser. geofiz. no.1:46-53 Ja '61. (MIRA 14:1)

1. Akademiya nauk SSSR, Institut fiziki Zemli.  
(Electric prospecting)

DMITRIYEV, V.I.

Diffraction of electromagnetic waves on a conducting plate situated  
in a conducting space. Izv. AN SSSR. Ser. geofiz. no.6:731-735 Je  
'62. (MIRA 15:6)

1. Akademiya nauk SSSR, Magnitnaya laboratoriya.  
(Electromagnetic waves---Diffraction)

ZIMA, Vaslav[Zima Vaclav]; KUBIN, Boris; VASIN, V.I.[translator];  
DMITRIYEV, V.I., red.

[Electronic methods for measuring small time intervals.  
Translated from the Czech] Elektronnye metody izmereniia  
malykh intervalov vremeni. Moskva, Energiia, 1965. 245 p.  
(MIRA 18:10)



AUTHOR: Dmitriyev, V. I.

TITLE: Diffraction of plane electromagnetic field by cylindrical bodies imbedded in stratified media

SOURCE: Moscow. Universitet. Vychislitel'nyy tsentr. Sbornik rabot, no. 3, 1965. Vychislitel'nyye metody i programmirovaniye (Computing methods and programming), 307-316

TOPIC TAGS: electromagnetic wave diffraction, stratified medium, integral equation, electromagnetic field, electromagnetic wave propagation

ABSTRACT: Integral equations are derived for the electromagnetic field diffracted by a conducting cylinder placed in a plane-parallel stratified medium, with the cylinder being completely imbedded in one of the layers and with the generatrix of the cylinder parallel to the plane of the interface between layers. The derivation of the integral equation is based on application of the second Green's theorem to the electric field source function and to the secondary field. It is shown that the differential equations obtained for the electric and magnetic fields

Card 1/2

SUBMITTED: 00

ENCL: 00

SUB CODE: EM, MA

NR RIF SOV: 001

OTHER: 000

*OAB*  
Card 2/2

L 53028-65 ENT(d) IJP(c)

UR/3043/65/000/003/0317/0328

ACCESSION NR: AT5010213

AUTHOR: Dmitriyev, V. I.; Zakharov, Ye. V.

TITLE: Solution of a certain class of integral equations on a semi-infinite straight line

SOURCE: Moscow. Universitet. Vychislitel'nyy tsentr. Sbornik rabot, no. 3, 1965. Vychislitel'nyye metody i programirovaniye (Computing methods and programming), 317-328

TOPIC TAGS: integral equation, Wiener Hopf equation, electromagnetic wave propagation, electromagnetic diffraction, stratified medium, approximate solution

ABSTRACT: The authors consider an integral equation of the form

$$\varphi(t) - \int_0^{\infty} (k(t-s) + p(t, s)) \varphi(s) ds = f(t).$$

which differs from the standard Wiener-Hopf equation

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L 53028-65

ACCESSION NR: AT5010213

$$\varphi(t) - \int_0^{\infty} K(t-s) \varphi(s) ds = f(t). \quad (A)$$

in that the kernel contains the bounded and continuous additional function  $p(t, s)$ . Equations of the type considered here are encountered in the solution of problems of diffraction in stratified media. A proof for the existence and uniqueness of the solution of Eq. (B), based on the proof presented by M. G. Kreyn (Uspekhi matem. nauk XIII, no. 5, 1958) for the solution of Eq. (A), is first presented. A particular case of Eq. (B), dealing with the diffraction of the electromagnetic waves by a conducting plate imbedded in a conducting half-space, is then evaluated as a particular example. The solution is obtained by successive approximations, the accuracy of which is briefly discussed. Orig. art. has: 2 figures and 39 formulas.

ASSOCIATION: Vychislitel'nyy tsentr Moskovskogo universiteta (Computation Center, Moscow University)

SUBMITTED: 00

ENCL: 00

SUB CODE: MA, EN

NR REF SOV: 004

OTHER: 004

Card 2/2 308

L 53027-65 EWT(1)/EEC(t) Pg-4/P1-4/P1-4 LHB/GG/GW  
 ACCESSION NR: AT5010216 UR/3043/65/000/003/0386/0397

AUTHOR: Dmitriyev, V. I.

TITLE: Calculation of electromagnetic field in the frequency sounding method

SOURCE: Moscow. Universitet. Vychislitel'nyy tsentr. Sbornik rabot, no. 3, 1965.  
 Vychislitel'nyye metody i programmirovaniye (Computing methods and programming),  
 386-397

TOPIC TAGS: electromagnetic field calculation, geophysical prospecting, multi-layered medium, low frequency sounding

ABSTRACT: The author proposes an algorithm for calculating the electromagnetic field produced in the ground by a buried grounded cable, such as is used for geophysical prospecting in various geological configurations, by a method based on the variation of the electromagnetic field as a function of the frequency. Low frequencies, from 200 cps down, are used. It is pointed out that a theoretical determination of the properties of the multilayered ground is very complicated. Although a program was developed by Ye. A. Zhigolev et al. (Vychisl. metody i programmirovaniye, no. 1, Izd-vo MGU, 1962) for such calculations, the author claims that his algorithm reduces the volume of calculation while retaining the same degree of ac-

Cord 1/2

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ACCESSION NR: AT5010216

curacy. The method consists essentially of calculating the response of the multi-layered medium to a signal from an electric dipole located on the surface of the layered medium at the origin. The problem is reduced to calculating only the horizontal component of the electric field and the vertical component of the magnetic field (the measured quantities), and recurrence formulas are derived to provide for the continuity of these components at the various interfaces between the layers. A detailed calculation is presented for one of the layers. Orig. art. has: 45 formulas.

ASSOCIATION: Vychislitel'nyy tsentr Moskovskogo universiteta (Computation Center, Moscow University)

SUBMITTED: 00

ENCL: 00

SUB CODE: EM, ES

NR REF SOV: 003

OTHER: 000

Br 3  
Card 2/2

DMITRIYEV, V.I.

Determinating the relationship of heat flows in aluminum electrolytic cells from temperature of fusion. TSvet. met. 38 no.2:49  
P '65.  
(MIRA 18.3)

ACC NR: AP6036360

SOURCE CODE: UR/0387/66/000/011/0083/0099

AUTHOR: Zakharov, Ye. V.; Dmitriyev, V. I.

ORG: Mechanics and Mathematics Department, Moscow State University (Mekhaniko-matematicheskiiy fakul'tet, Moskovskiy gosudarstvennyy universitet)

TITLE: Diffraction of electromagnetic waves on an ideally conducting half plane in a layered medium

SOURCE: AN SSSR. Izvestiya. Fizika Zemli, no. 11, 1966, 83-99

TOPIC TAGS: electromagnetic wave diffraction, ~~wave-diffraction, conducting half-plane problem, half-plane, diffraction-problem~~ *approximate solution, integral equation*

ABSTRACT: The diffraction of an electromagnetic field from an arbitrary point source on an ideally conducting half plane located in a layered medium is solved by the method proposed by V. I. Dmitriyev [Sb. rabot Vychislitel'nogo tsentra, no. 5, 1966]. In the general case of the problem is reduced to the system of two Fredholm integral equations of the 2nd kind. It is shown that in the quasi-stationary case the method of successive approximations is applicable to this system. Thus, the approximate solution of the problem, which is limited by the first approximation of the solution of the integral equation system, can be written in a fairly simple analytical form. Orig. art. has: 29 formulas and 4 figures.

SUB CODE: 08/ SUBM DATE: 12May66/ ORIG REF: 007/ OTH REF: 005/ ATD PRESS: 5106  
Card 1/1 UDC: 534.26.550.834



DMITRIYEV, Vladimir Ivanovich; SHVED, Ye.Ye., redaktor; KUMES, S.N.,  
redaktor; PROKHODTSEVA, S.Ya., redaktor; KOSHELEVA, S.M., tekhnicheskii redaktor

A.I. Butakov. Pod red. E.E. Shvade. Moskva, Gos. izd-vo geogr. lit-ry, 1955. 52 p.  
(Butakov, Aleksei Ivanovich, 1816-1869) (MIRA 8:4)

DMITRIYEV, Vladimir Ivanovich

[Submariners attack] Atakuiut podvodniki. Moskva,  
Voen.izd-vo, 1964. 341 p. (MIRA 17:12)

DMITRIYEV, V.K., kand. tekhn. nauk.

Selecting facilities for making up trains in designing hump yards on  
the basis of advanced technology. Trudy KHIIT no.27:177-200 '58.  
(Railroads--Making up trains) (MIRA 11:6)  
(Railroads--Hump yards)

<sup>Y</sup>  
DMITRIYEV, V. K. and K. A. MIRONOV.  
<sup>1</sup>

Kontrol' i avtomaticheskoe regulirovanie elektricheskikh pechei  
soprotivleniia. (Vestn. Mash., 1950, no. 8, p. 40-43)

(Inspection and automatic control of electric resistance furnaces. )

DLC: TML.VL

SO: Manufacturing and Mechanical Engineering in the Soviet Union,  
Library of Congress, 1953.

079

DMITRIYEV, V.K.

10683\* Testing the Burning of Low-Grade Coals in Burners With Baffles. (Russian.) V. K. Dmitriev. *Za Ekonomiku Topliva*, v. 9, Apr. 1952, p. 8-11.

A series of tests was made on the use of low-grade coals from the Central Asiatic Basin in power plants using special combustion chambers. Data are tabulated.

UL'YANOV, I.A., inzh.; SOLDATENKOV, A.P., inzh.; ~~DMITRIYEV, V.K.,~~  
inzh.; MASHIN, M.G., inzh.; POZIGUN, L.V., inzh.;  
DUKTOVSKAYA, O.A., inzh.; CHEKUNOV, I.N., inzh.; LIKUMOVICH,  
Ye.F., inzh.; KAPITONOVA, Z.I., inzh.; LEVITSKIY, Ya.B., otv.  
red.; ROMANOVA, L.A., red. izd-va; OVSEYENKO, V.G., tekhn.red.

[Coals of the U.S.S.R.] Ugli SSSR; spravochnik. Moskva, Gos  
gortekhnizdat, 1962. 318 p. (MIRA 15:11)

(Coal)

STEFANOV, N.Y., kand. tekhn.nauk, prof.; OLESHKO, Grigoriy Ivanovich, kand. tekhn.nauk,dots.; DEL RIO, Bernardo, kand. tekhn.nauk, dots.; GRITSENKO, V.I., inzh.; KOSTENKO, O.A., inzh.; PARKHOMENKO, N.V., inzh.; KULESHOV, V.M., inzh.; GONCHAROV, N.Ye., kand. tekhn. nauk, dots.; LESHCHINSKIY, A.A., kand. tekhn. nauk, dots.; DOLABERIDZE, A.M., doktor tekhn. nauk, prof.; ZLATKOVSKIY, V.N., kand. tekhn. nauk, dots.; DMITRIYEV, V.K., kand. tekhn. nauk, dots.; SHIPULIN, A.P., inzh.; SHISHLYKOV, Ye.S., red.

[Automation of the operation of hump yards using electronic computers] Avtomatizatsiia sortirovochnykh stantsii ( s primeneniem vychislitel'nykh mashin. Moskva, Transport, 1964. 175 p. (MIRA 17:6)

STEFANOV, N.Ya., kand. tekhn. nauk, prof.; OLESHKO, G.I., kand.  
tekhn. nauk, dots.; DEL RIO, B., kand. tekhn. nauk, dots.;  
GRITSENKO, V.I., inzh.; KOSTENKO, O.A., inzh.; PARKHOMENKO,  
N.V., inzh.; KULESHOV, V.M., inzh.; GONCHAROV, N.Ye., kand.  
tekhn. nauk, dots.; LESHCHINSKIY, A.A., kand. tekhn. nauk,  
dots.; DOLABERIDZE, A.M., doktor tekhn. nauk, prof.;  
ZLATKOVSKIY, V.N., kand. tekhn. nauk, dots.; DMITRIYEV,  
V.K., kand. tekhn. nauk, dots.; SHIPULIN, A.P., inzh.;  
SHISHLYKOV, Ye.S., red.

[Automation of the operation of hump yards (using electronic  
computers)] Avtomatizatsiya raboty sortirovochnykh stantsii  
(s primeneniem vychislitel'nykh mashin). Moskva Transport,  
1964. 175 p. (MIRA 17:7)



DMITRIYEV, V.L.

Empirical formulas for the determination of the thickness of an active zone in the sphere of the influence of an imperfect well.  
Uzb. geol. zhur. 9 no.3:40-45 '65. (MIRA 18:8)

1. Tashkentskiy politekhnicheskii institut.

DMITRIEV, V. K.

Deposition of light-sensitive silver halide layer on plastics. V. K. Dmitriev. *Poligraf. Proizvodstvo* 1951, No. 12, 12-14. The application of light-sensitive films (on celluloid base) on form-stable plastics, useful especially in cartography, is discussed. Vinyl plastics of local manufacture (Asatron and Viniproz) were used as the base; both are outstanding in form-stability. These are coated with an adhesive layer made up by addition of 10 ml. MeOH and 1 ml. AcOH to 1.8 g. gelatin in 3.75 ml. H<sub>2</sub>O, followed by 2 g. celluloid in 70 ml. MeOH and 70 ml. Me<sub>2</sub>CO. The sensitive emulsion is held very well by this adhesive. However, in view of variation of the behavior of the plastics, which in some cases gave imperfect adhesion, an interlayer of 1% soln. of Plexiglass in (CH<sub>2</sub>Cl)<sub>2</sub>, formed by deposition and evapn. of the solvent, is most satisfactory. After this layer had been deposited and evapd., the gelatin-celluloid interlayer is deposited as above, either by hand or mechanically. The photoemulsion can be applied either to the combined interlayer, or even to the gelatin-celluloid interlayer alone. For gluing the plastic sheets to glass (for better handling) concd. gelatin soln. is best, in presence of gum arabic and urea. G. M. Kosolapoff

*DMITRIYEV, V.K.*

DMITRIYEV, V.K.

Substratum coating for bromine-gelatin emulsions used on "viniproz"  
film base. Sobr.st.po kart. no.2:47-50 '52. (MIRA 10:12)  
(Photographic emulsions) (Map printing)

DMITRIYEV, V. K. and MIKHAYLOV, V. Ya.

"Deformation of Photofilms", Sb. ref. Tsentr. n-i. in-ta geod., aeros'-  
yenki i kartogr., No. 2, PP 52-55, 1954.

Most convenient photofilms for photogrammetry were those on special base, and particularly hydrotype films. To avoid deformations of stored negatives, prings should be prepared on paper with aluminum base. (RZhAstr, No. 11, 1955)

SO: Sum No. 812, 6 Feb 1956.

DMITRIYEV, V. K.

New retouching lacquer for diapositives. Geod. i kart. no.5:76 My '57.  
(MIRA 10:8)

1. Tsentral'nyy nauchno-issledovatel'skiy institut geodezii, aeros"-  
yemki i kartografii.

(Photography--Retouching)

MIKHAYLOV, V.Ya.; Primalni uchastiy: DMITRIYEV, V.K.; BELYAYEVA, N.M.;  
KULAKOVA, T.A.; SHAKOVA, T.V.

Study of deformations of aerial films. Trudy TSNIIGAIK no.142:  
97-122 '61. (MIRA 15:8)

(Photography--Films)

DMITRIYEV, V.L.; DUGINA, N.A., tekhnicheskiy redaktor

~~Redacted text~~

[Multitool graduated cutter head for the millin of concave cylindrical surfaces] Mnogoreztsovaia stupenchataia gologka dlia frezerovaniia vykruzhek. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry, 1953. 13 p. (MLRA 7:8)  
(Milling machines)

DMITRIYEV, V. L.

15-57-4-5427

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 4,  
p 188 (USSR)

AUTHORS: Dmitriyev, V. L., Arkhangel'skiy, G. I.

TITLE: Some Notes on Methods of Studying Settling-Deformation  
in Loess and Loess-Like Rocks (Nekotoryye zamechaniya  
po metodike izucheniya prosadochnosti lessov i les-  
sovidnykh porod)

PERIODICAL: Tr. Sredneaz. politekhn. in-ta, Tashkent, Gosizdat,  
UzSSR, 1955, pp 69-78.

ABSTRACT: The authors propose the following classification for  
contractions in loess during wetting: 1) settling of  
loess, reacting to wetting like normal clay-silt soil;  
2) secondary settling of loess, reacting sharply to  
wetting because of external loading; 3) sagging of  
loess, reacting sharply to wetting because of the  
weight of its own mass. Equations are given for quanti-  
tative determination of the settling, secondary settling,  
and sagging of loess. The authors point out the advisa-  
bility, during engineering-geological investigations, of

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15-57-4-5427

. Some Notes on Methods of Studying Settling-Deformation (Cont.)

exploring the entire sequence of loess. If ground water is present in the loess, the layer should be explored to the water table. Methods are proposed for qualitative evaluation of anticipated sagging depending on the details of the investigation that has been conducted. In erecting buildings on loess soil, the authors suggest that the maximum moisture of the loess foundation be maintained during the entire period of construction.

Card 2/2

V. A. F.

MAVLIYANOV, G.A., otv.red.; KRYLOV, M.M., doktor geologo-mineral.nauk, red.;  
KENESARIN, N.A., doktor geologo-mineral.nauk, red.; DMITRIYEV,  
V.I., kand.geologo-mineral.nauk, red.; GEYNTS, V.A., inzh., red.;  
VORONOV, F.I., kand.geologo-mineral.nauk, red.; TULYAGANOV, Kh.T.,  
inzh., red.; GAFUROV, V.G., kand.geologo-mineral.nauk, red.;  
BEDER, B.A., kand.geologo-mineral.nauk, red.; KHASANOV, A.S., inzh.,  
red.; MANSUROV, A.R., red.izd-va; CHERNYAVSKAYA, A.B., red.izd-va;  
GOR'KOVAYA, Z.P., tekhn.red.

[Transactions of the Second Hydrogeological Conference of Uzbekistan,  
Tashkent, Apr.2-9, 1958] Trudy Vtorogo Uzbekistanskogo gidrogeologi-  
cheskogo soveshchaniia. Tashkent, Izd-vo Akad.nauk Uzbekskoi SSR, 1959.  
339 p. (MIRA 13:9)

1. Uzbekistanskoye gidrogeologicheskoye soveshchaniye, 2nd. Tashkent,  
1958. (Soviet Central Asia--Water, Underground--Congresses)

DMITRIYEV, V.L.

The DK-50Zh expander-compressor and the DVD-9 high-pressure expander. Biul.tekh.-ekon.inform. no.12:29-32 '59.

(MIRA 13:4)

(Compressors) (Liquid oxygen)

DMITRIYEV, V.I.

~~SECRET~~  
The VUO,6/8T air-compressor unit for operations under tropical  
conditions. Biul.tekh.-ekon.inform. no.4:41-43 '60. (MIRA 13:11)  
(Air compressors)

DMITRIYEV, V.L., gornyy inzh.

Determining the rational diameters of borehole charges in the mines of the Darasun Mine Administration. Gor.zhur. no.12:25-26 D '63. (MIRA 17:3)

1. Chitinskiy filial Tsentral'nogo nauchno-issledovatel'skogo gornorazvedochnogo instituta tsvetnykh, redkikh i blagorodnykh metallov.

DMITRIYEV, V.L.

Some methodological instructions for bringing about and processing the results of experimental pump-out from a well revealing a dual-strata medium. Uzb. geol. zhur. 8 no.5:37-45 '64. (MIRA 18:5)

1. Tashkentskiy politekhnicheskii institut.

YEGOROV, Mikhail Yegorovich, doktor tekhn. nauk, prof.; DEMENT'YEV,  
Vladimir Ivanovich, kand. tekhn. nauk, dots.; TISH'N, Sergey  
Dmitriyevich, kand. tekhn. nauk, dots. [deceased]; ~~DMITRIYEV~~  
Vitaliy L'vovich, kand. tekhn. nauk, dots.; VLADZIYEVSKIY,  
A.P., doktor tekhn. nauk, prof., retsenzent; KUNIN, P.A.,  
inzh., red.

[Technology of machinery manufacture] Tekhnologiya mashino-  
stroeniia. Moskva, Vysshaya shkola, 1965. 589 p.  
(MIRA 18:8)

PA 171145

DMITRIYEV, V. M.

USSR/Electricity - Transmission Lines      Nov 50  
Electrification of  
Agriculture

"Electric Power Transmission With Portable  
Single-Wire Lines," V. M. Dmitriyev, Eng'r,  
Docent V. A. Shustov, Leningrad

"Elektrichestvo" No 11, pp 38-41

Suggests, on basis of operational tests, combination 6-kv circuit with portable 1-wire lines and high-voltage static condensers should be widely used in electrification of agricultural districts during seasonal loads.

171145

USSR/Electricity - Transmission Lines      Nov 50  
(Contd)

Economical 1-wire line can thus be used to supply 3-phase power as needed. Submitted  
6 Mar 50.

171145



Electrical Engineering Abstracts  
May 1954  
Cables

1923. Determination of the economic current density  
in a cable network. V. M. DMITRIYEV. *Elektrichestvo*,  
1953, No. 10, 24-7. In Russian.  
Existing Soviet methods are discussed and new  
formulas proposed, based on a minimum cost of  
transmitted energy, and taking into account additional  
factors. A comparison of economic current densities  
obtained from the new formulas with officially  
recommended densities, are in confirmation of the  
latter.  
R. QUELON

USSR/Electricity - High Frequency Generators Feb 53

"Circuit Changes for GZ-46 High-Frequency Generators,"  
Engr V. M. Dmitriyev

Prom Energet, No 2, pp 12-13

Describes, with diagram, improved circuit for industrial hf generators GZ-46 (which do not develop rated power because of inadequate capacitance in circuit) developed by workers of power div of a plant. In new circuit, 3 GZ-46 generators are operated in parallel from single 100-kva, 6-kv power transformer TM-100/6, with following results: freeing 2 TM-100/6 transformers; utilization of transformers' rated power; raising pf from 0.72 to 0.86; reducing cost of hf heat treatment 20%.

PA 248T34

248T34

DMITRIYEV, V.M., inzhener.

Problem of the most advantageous operation of urban medium-voltage  
networks. Trudy LIEI no.7:141-150 '54. (MLRA 9:9)  
(Electric networks)

*DMITRIYEV, V. M.*

Subject : USSR/Electricity AID P - 648  
Card 1/1 Pub. 27 - 17/34  
Author : Dmitriyev, V. M., Eng., Leningrad  
Title : Urban medium voltage networks  
Periodical : Elektrichestvo, 9, 75-77, S 1954  
Abstract : Technical and economic characteristics of various distribution systems for residential sections with many story buildings are presented by the author. 2 diagrams, 3 references (1940-1951).  
Institution : Leningrad Institute of Engineering and Economics im. Molotov  
Submitted : Ap 3, 1954

DMITRIYEV, V.M., inzhener.

Increasing the reliability of telegraph communication operating with  
Baudet apparatus. Vest.svyazi 16 no.8:11 Ag '56. (MLRA 9:10)

1.TSentral'nyy Nauchno-issledovatel'skiy institut svyazi.  
(Telegraph)

AYZENBERG, B.L., kandidat tekhnicheskikh nauk, dotsent; DMITRIYEV, V.M.,  
inzhener; KONSTANTINOV, B.A., kandidat tekhnicheskikh nauk, dotsent;  
NIKOGOSOV, S.N., kandidat tekhnicheskikh nauk, dotsent.

Principles for efficient construction of high, medium and low tension  
electric networks for cities. Trudy LIEI no.16:80-146-157.  
(Electric power distribution) (MLRA 10:8)

DMITRIYEV, V.M., inzh.

Optimal distribution of the calculated voltage drop between the  
medium and low voltage networks. Trudy LNI no.19:93-98 '57.  
(Electric networks) (MIRA 11:6)

8(3)

SOV/112-59-3-4772

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 3, p 66 (USSR)

AUTHOR: Ayzenberg, B. L., Dmitriyev, V. M., and Klebanov, L. D.

TITLE: Methods for Determining and Reducing Electric-Energy Losses in Electric Networks (Voprosy metodiki opredeleniya i snizheniya poter' elektroenergii v elektricheskikh setyakh)

PERIODICAL: Tr. Leningr. inzh.-ekon. in-ta, 1958, Nr 21, p 120, ill.

ABSTRACT: Methods are examined for determining power losses and electric-energy losses on the basis of voltage losses in the networks of various configurations; the methods are considered for determining electric-energy losses: (1) in the elements of a bulk-power system that includes generators, step-up and major stepdown substations, and interconnecting lines; (2) in a network over 20 kv; (3) in a 6-10-kv network; (4) in a network under 1 kv; (5) in the residential-building wiring and at small consumers. Recommendations are given on the optimum load distribution in the system and on loss

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8(3)

SOV/112-59-3-4772

Methods for Determining and Reducing Electric-Energy Losses in Electric Networks  
reduction in various elements of the system. Determination of measures to  
reduce losses is facilitated by comparing the actual losses with the losses  
forecast and by analyzing the discrepancies between the two.  
Bibliography: 45 items.

I.M.R.

Card 2/2

AYZENBERG, B.L.; DMITRIYEV, V.M.; KLEBANOV, L.D.

Study of the electric load of municipal electric networks. Trudy  
LIEI no.33:20-65 '60. (MIRA 14:8)  
(Electric power distribution)

DMITRIYEV, V.M.

Use of mathematical statistics for studying the electric loads of  
municipal networks. Trudy LIEI no.33:80-101 '60. (MIRA 14:8)  
(Electric power) (Electric power distribution)

SOKOLOV, N.V., kand.tekhn.nauk; SHCHETKIN, L.I.; GOKHBERG, Ya.A., inzh.;  
KRASIL'NIKOV, L.A., inzh.; DMITRIYEV, V.M., inzh.

Production of rope wire with a heavy zinc coating. Stal' 22  
no.4:368-370 Ap '62. (MIRA 15:5)

1. Beloretskiy staleprovolochno-kanatnyy zavod.  
(Wire drawing) (Zinc plating)